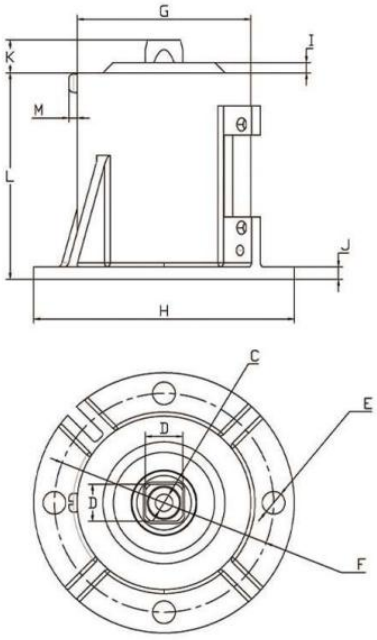
Bolt Head Lock with Bottom-Mounted Configuration

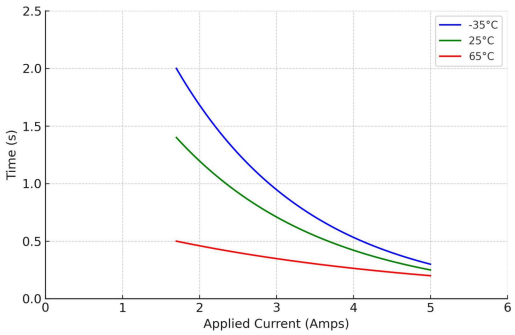
During operation, a screw passes through the locked component and threads into the pre-drilled hole at the head of the notched bolt. The system is then preloaded. When release is required, the integrated heater is electrically powered. Once the recovery force generated by the **SMA Linear Elongation Ring** exceeds the fracture strength of the notched bolt, the bolt breaks at its machined weak point, allowing structural separation.

The **notched bolt** is a **single-use fracture element** that must be replaced after each release event. All remaining components are **reusable** and support multiple thermal release cycles without replacement.

Bolt Head Lock Technical Specifications

Performance Index	FB5000B	FB5000HB	FB12000HB
Weight (g)	< 200	< 250	< 300
Locking Force (N)	0~5000	0~5000	0~12000
Rated Voltage (V)	28 / 34 / 42	28 / 34 / 42	28 / 34 / 42
Rated Power (W)	24	45	80
Bolt Breaking Load (N)	≥12000	≥12000	≥26000
Service Life (cycles)	>10	>10	>10
Release Shock (g)	<300	<300	<500
Operating Temp (°C)	-80~+55	-80~+70	-80~+70
Release Time at Room Temp (s)	<45	<60	<60
Dimension C (mm)	M5×6	M5×6	M8×8
Dimension D (mm)	9×9	9×9	12×12
Dimension E (mm)	4-Φ5.5	4-Φ5.5	4-Φ6.5
Dimension F (mm)	Φ53	Φ53	Φ58.5
Dimension G (mm)	Φ42	Φ42	Φ47
Dimension H (mm)	Φ63	Φ63	Φ70
Dimension I (mm)	2.5	2.5	2
Dimension J (mm)	3	3	4
Dimension K (mm)	8	8	11.3
Dimension L (mm)	50	60	69.2
Dimension M (mm)	2	2	2





Function Time at Various Temperatures